

## **REMARKS**

The Office Action, mailed October 27, 2008, considered and rejected claims 1-42. Claims 1-11, 14-16, 21-28, 30-34 and 39-41 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Ganesh* (U.S. Patent No. 6,295,610). Claims 9 and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Ganesh* in view of *Kumomura* (U.S. Patent No. 5,963,926). Claim 42 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Ganesh* in view of *Kumomura*, and in further view of *Kesler* (U.S. Patent No. 7,062,502). Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Ganesh* in view of *Craig* (U.S. Patent No. 6,757,708). Claims 13, 17-20 and 35-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Ganesh* in view of *Kesler*.<sup>1</sup>

By this paper, claims 1, 21, 39 and 42 are amended, while no claims are added or cancelled. Accordingly, following entry of this paper, claims 1-42 remain pending, of which claims 1, 21 and 42 are the independent claims at issue.

### **1. Objection to the Specification**

Inasmuch as claims 21 and 39 have been amended to recite "computer-storage media" which is expressly supported by Applicant's original specification, Applicant respectfully submits that the objection to the specification is overcome.

### **2. Rejections under 35 U.S.C. § 102**

As is axiomatic, a claim can be anticipated only if each of the claim elements is expressly or inherently found in the prior art. Furthermore, it is not sufficient for mere generalizations as not only must all of the elements be present in a single reference, but they must be disclosed in at least as much detail as that provided in the claims, and in the same organization as provided in the claims.

Accordingly, in the present application in order for the claims to be anticipated by the *Ganesh* reference, *Ganesh* must not only disclose every limitation, but it must do so in at least as much detail as that provided in the pending claims.

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<sup>1</sup> Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

In that regard, Applicant's claims generally relate to methods and computer program products for executing a transaction that includes direct methods to perform the transaction and that can at least partially reverse the effects of the direct methods of the transaction. As recited in claim 1, for example, such a method includes the creation and maintenance of a mapping between groups of direct methods and corresponding groups of inversion methods, which inversion methods are reusable for a number of different transactions. After creation of the mapping, a transaction is begun. A group of direct methods is run as part of the transaction. Also within the transaction, the mapping is used to identify the corresponding group of one or more inversion methods corresponding to the direct methods. The identity of the corresponding group of inversion methods is then recorded in a compensation record for the transaction. Independent claim 21 recites a computer program product generally corresponding to the method of claim 1. Additionally, claim 42 recites a method having similar claim elements, but further defining various aspects, including the structure of the mapping and compensation records, and the manner in which the transaction is initiated.

As was previously discussed with the Examiner, while *Ganesh* generally describes performance of a transaction and the storage of undo data items that include specific changes made during the transaction, so that such changes can be undone, it fails to anticipate the pending claims, for at least the reasons that *Ganesh*, whether cited alone or in combination with the art of record, fails to disclose the claimed method. In other words, while *Ganesh* can undo changes of a transaction, it fails to do so in the same manner claimed. For example, among other things, *Ganesh* fails to disclose that a mapping is created to reference indirect methods that are reusable for multiple different transactions or when a direct method is run, the identity of the corresponding group of inversion methods is stored in a compensation record.

In particular, *Ganesh* discloses a system for performing recovery in which two or more changes made by a particular transaction can be removed in parallel. As part of such a system rollback entries are created to include information to undo changes to a prior state. The rollback entry includes a transaction ID, a block number, a prior change pointer, and undo information. (Col. 8, ll. 27-33). This information identifies the transaction which performed the operation that corresponds to the undo record, the data container on which the operation was performed, and the data necessary for undoing the operation that was performed on the identified block by the identified transaction. (Col. 8, ll. 33-39). While *Ganesh* depicts physical pointers to rollback

entries, rollback entries do not contain physical pointers to the undo record that includes the most recent change information. Instead, each rollback entry contains a record of the entry that was overwritten in the transaction list by the entry for the transaction at issue. As a result, by applying undo information in an undo record, the corresponding undo pointer in a transaction list is automatically updated to point to the next most recent change information. (Col. 9, ll. 4-21).

In other words, *Ganesh* discloses a system that tracks changes by maintaining records of the changes on a transaction-by-transaction basis. Specifically, when a change is made, the change is logged in the rollback entry by including a record of the entry that was changed by the particular change being made. Notably, each of these entries are made on a transactional basis. Specifically, when a change is made, the entry is logged to include the undo information and the transaction to which it relates. Consequently, all undo information is specifically tied to the transaction of which it is a part. In direct contrast thereto, Applicant's claims note that inverse methods (i.e., methods to reverse a direct method) can be used for any of multiple transactions. The mapping of rollback entries in *Ganesh* cannot, therefore possibly read upon the mapping of the pending claims in which the mapping ties direct and inverse methods together, but without necessarily tying inverse methods to a particular transaction.

Of note, the Office states that the claims of the pending application obtain the same results in *Ganesh* and that no distinguishing language is present to distinguish a method from its result. Applicant respectfully traverses. In particular, the claims specifically recite that the mapping between direct/indirect methods is created prior to beginning a transaction and that when direct methods of the transaction are executed, the mapping is used to relate the executed direct methods with their corresponding inverse methods, and that those inverse methods are stored in a compensation record. None of these are present in *Ganesh*. The claims thus specifically recite steps taken to obtain a result (i.e., undoing a direct method) which are distinguished from those present in *Ganesh*. In particular, as *Ganesh* maintains rollback entries as part of a transaction, the transaction must therefore be identified and begun before the rollback entries can be created and tied to the transaction. Further, *Ganesh* maintains as a part of the rollback entries a reference to a prior change made. In this manner, the records automatically keep track of the order of changes in a transaction. Applicant's claims, however, recite that the mapping is used to relate direct methods to inverse methods (i.e., methods that undo the executed

direct method). This is clearly distinguished as the pending claims therefore reference methods to effect the change, whereas *Ganesh* references the prior changes themselves.<sup>2</sup>

Of additional note, with respect to the creation of the mapping before the transaction begins, the Office cites to elements 800, 1050, and 1200 of Figures 8, 10, and 12, respectively. Interestingly, the cited elements are the very first step taken in each method. Inasmuch as executing the transaction is the first element, it would therefore necessarily result that any mapping that occurs as part of the disclosed process would follow, thereby being directly contrary to the pending claims which create the mapping prior to beginning a transaction.

### 3. Rejections under 35 U.S.C. § 103

With respect to the remaining claims which are rejected under 35 U.S.C. § 103 as being obvious in view of *Ganesh* in combination with one or more of *Kumomura*, *Kesler*, and/or *Craig*, Applicant respectfully traverses. In particular, Applicant respectfully submits that *Ganesh*, when cited in any combination with the other art, fails to disclose or suggest the pending claims which each include at least a mapping that is created before a transaction begins and includes a mapping of direct methods to indirect methods that can be used for multiple, different transactions, as such are cited in combination with the other art of record.

For instance, *Craig* discloses a system that caches dynamic content and determines when the cached content should be invalidated or purged. *Craig* does not, however, have any disclosure relating to mapping of any sort, or to a transaction-based system, let alone mapping of direct methods to inverse methods that undo the direct methods. Accordingly, when *Craig* is combined with *Ganesh*, the combination fails to disclose or reasonably support a mapping of direct/indirect methods in which the indirect methods can be performed for any of numerous transactions.

*Kumomura* is similarly deficient in this regard. For example, *Kumomura* discloses a computer-implemented method for processing insurance transactions using one or multiple cards. In *Kumomura*, the payment of insurance is performed utilizing an automatic transaction processor. The system may, for example, connect the payor of the insurance contract's bank

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<sup>2</sup> Applicant further disagrees with the Office's statement that methods "are broader than results because an assignment method includes the result." In the general context of claim language, a broader claim is one with fewer limitations. Thus, a claimed method that includes the method and the result is necessarily narrower than a claim that includes only the result. Further, a structural difference is clearly evident in that the pending claims store inversion methods that are not tied directly to a specific transaction whereas *Ganesh* ties all changes to their specific transaction.

account to the insurance payment system so that when the appointed time for payment comes, the system can automatically deduct the cost of insurance from the payor's account. If the balance is less than the amount necessary, an additional method of payment is selected and an insurance card can be input. An insurance policy may also be cancelled by the user. Accordingly, *Kumomura* relates to paying for and cancelling an insurance policy (and transactions to pay and cancel the same). Such transactions are fundamentally different from those at issue in the claims and disclosed with respect to *Ganesh*. Further, the cancellation of the insurance contract does not include mapping a direct method with an inverse method, let alone an inverse method that is reusable for multiple transactions. Thus, the combination of *Ganesh*, *Kumomura* and *Craig* also fails to disclose or reasonably support Applicant's pending claims.

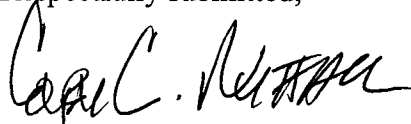
*Kesler* is equally devoid of additional relevant disclosure. Specifically, *Kesler* discloses a SOAP message and the passage of parameters through SQL. Applicant notes, however, that nothing in *Kesler* appears to be related to the storage of inversion methods, the use of parameters for effecting inversion methods, or mapping direct and inversion methods, or even transactional processing. As a result, *Kesler*, whether cited alone or in combination with the other art of record, also fails to disclose or reasonably support creation or a mapping that relates direct and inverse methods, particularly when considering that the inverse methods are usable for multiple transactions and that *Ganesh* contains the expressly contrary teaching of keeping undo records tied specifically to the transactions in which changes are made.

In view of the foregoing, Applicant respectfully submits that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 533-9800.

Dated this 20<sup>th</sup> day of April, 2009.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Rick D. Nydegger", written over the printed name.

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